

**Appendix G:
Compatibility Determinations**

Use: Black Bear Hunt

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

A. What is the use? Is the use a priority use?

The use is public hunting of black bears. The entire refuge supports black bears. The refuge contains one of the largest concentrations of black bears on the east coast of the United States. Two studies completed on the bear population within the Great Dismal Swamp, almost 20 years apart, have shown little change in the population density (Hellgren 1988 and Tredick 2005) which indicates a stable population of bears. The population is estimated to be approximately 250-350 bears. Hunters would experience a high quality wildlife-dependent recreational activity which is limited in the surrounding area. Hunting is identified in the National Wildlife Refuge System Act of 1997 as a priority wildlife-dependent public use.

B. Where would the use be conducted?

The hunt will be conducted at up to two entrances within Virginia portion of the refuge. Deer hunting is also allowed in this area but prior to the bear hunts. The first year the hunt areas will be access through the Railroad Ditch and the Jericho Ditch Entrances. The total acreage open to hunting during this first year will be approximately 20,700 acres. Each year the hunt and hunt areas will be evaluated and the specific hunting units may change but no more than 25% of the refuge will be open for bear hunting.

C. When would the use be conducted?

Hunts will be conducted on up to two dates in late November or early December in accordance with the established bear hunting seasons in Virginia. The areas are also opened to white-tailed deer hunting on designated dates in October and early November but the hunts will not overlap. Accessibility to much of the hunt area can be significantly impacted by rain events. A combination of rain soaked roads and vehicle traffic can cause damage to the roads as well as make access difficult or impossible. Because of this problem, if a significant rain event occurs

or is predicted the scheduled hunt may be postponed to alternate rain delay dates. These rain delay dates will be identified in advance.

D. How would the use be conducted?

Permits will be required by hunters to manage both access and harvest. No more than 100 permits will be issued. This will help to ensure that the hunt does not negatively impact the black bear population and to enhance hunter safety. These permits will be issued through a random drawing. Hunters will be limited to the use of shotguns, 20 gauge or larger, loaded with slugs. The use of dogs to hunt bears will be prohibited. Hunters will be required to check in and out each day. The harvest limit will be approximately 20 bears. The take each day will be monitored and if more than 10 bears are harvested on the first day, various parameters will be evaluated and the second hunt day may be cancelled. The hunt areas will be closed to other public use during the hunt; however, other trails will continue to be open.

E. Why is the hunt being proposed?

The main purpose of the hunt is to add a priority wildlife-dependent recreational opportunity for the public. There are limited public hunting opportunities in southeastern Virginia and northeastern North Carolina. By implementing a bear hunt an additional 200 hunter days will be provided to the area. Additionally, the continued loss of habitat and corridors outside the refuge may eventually create the need to maintain or reduce the black bear population to levels that can be safely supported solely by the refuge. Due to this concern, collaboration with biologists from the Virginia Department of Game and Inland Fisheries and the North Carolina Wildlife Resources Commission began in 1997 to assess the status of bear populations within the refuge watershed and determine the desirability to controlling the refuge bear population. After meeting with bear managers and experts from North Carolina and Virginia, a conservative bear hunt was proposed. This hunt would provide a wildlife-oriented recreational opportunity as well as provide the refuge with information on the physical parameters of the bear population.

Availability of Resources: The refuge will partner with the Virginia Department of Game and Inland Fisheries to obtain and record bear harvest data. Expense to the refuge will be minimal and primarily confined to issuing permits, staffing the entrance, and minor road repairs.

Staff time:	\$5,000
Road maintenance:	\$10,000

A portion of this cost will be recouped through a permit fee.

Anticipated Impacts of the Use: Implementing a limited recreational bear hunt in Virginia would result in negligible adverse, short-term impacts to the black bear population. These impacts would consist of disruption of daily activities such as foraging and resting during the bear hunt. Also, two of the entrances will be closed to other public uses. This impact will be minimal, since the hunts will be conducted during a lower use period, and at least one other entrance will be open for other visitation.

An in-depth evaluation of the potential long-term impacts of the bear hunt was conducted. Two studies completed on the bear population within the Great Dismal Swamp, almost 20 years apart, have shown little change in the population density (Hellgren 1988 and Tredick 2005) which indicates a stable population of bears.

The initial harvest recommendation was set based upon consultation with the Virginia Department of Game and Inland Fisheries, the North Carolina Wildlife Resources Commission, and Dr. Michael Vaughan of Virginia Polytechnic Institute and State University (VPI&SU) (the professor involved with both of the above-cited bear studies).

A harvest target of 20 bears for the hunt was based on the conclusion of the researchers that a hunt would not have an adverse impact on the bear population if no more than 20% of the female bears were taken. Both of the above cited studies assume a population of approximately 250-350, and a 50:50 male:female sex ratio is generally assumed. Twenty percent of the female bear population would then be 25-35 bears. This hunt proposes a cap of 20.

Additionally, the maximum number of hunters was determined by examining hunter success rates. Nearby states have hunter success rates of up to 5.5% on bear hunts. This rate included hunts with dogs and hunts on previously un-hunted

populations as well as hunts on denser populations (2004-2005 Maryland DNR Black Bear Report). If 100 hunters each day are allowed to hunt, using a 5.5% hunter success rate, a total of 11 bears might be taken over the two hunt days. An additional evaluation of the 2005 study by Catherine Tredick concerning the potential of the hunt creating an isolated population was conducted. Tredick's study states that "Genetic statistics at GDSNWR indicate that this population is isolated to some degree by geography (i.e., the Albemarle Sound) and encroaching urban development (i.e., the towns of Suffolk and Chesapeake). (Tredick 2005, i). Further discussion with both Tredick and Vaughan clarified that the Great Dismal Swamp population is isolated from the other two populations studied on the other side of the Albemarle Sound (Alligator River NWR and Pocosin Lakes NWR). Additionally they agreed that the hunt would not be detrimental to the bear population when held within the described parameters (personal communication, 26 October 2005, Columbia, NC).

Finally, no federal endangered or threatened species would be impacted by the hunt. Nor would there be any major impacts to state listed species. Based upon this review of the proposed bear hunt, impacts to the Great Dismal Swamp NWR bear population would be minimal.

Public Review and Comments: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: Black bear hunting is compatible with stipulations listed below.

Stipulations Necessary to Ensure Compatibility:

- The hunt program will be managed in accordance with state and federal regulations.
- No more than 100 bear hunt permits will be issued.
- Each hunter will be issued the list of refuge regulations.
- No more than two entrances will be open for hunting.
- Hunting will occur in late November or December to minimize the impacts on female bears.
- The harvest limit will be approximately 20 bears. If 10 or more bears are killed the first day, various parameters will be evaluated and the second hunt day may be cancelled.
- The hunt program will be reviewed annually to ensure the impacts on the population are sustainable.
- Hunt areas will be buffered to protect neighbors and visitors.
- News releases will be issued, the website updated, and signs posted to inform the public about the bear hunt before and during the event.
- Hunters must possess and carry the refuge permit.
- Hunters may use only shotguns, 20 gauge or larger, loaded with only slugs only. Buckshot may not be used.
- Dogs are prohibited.
- Hunters must wear 400 square inches (2600 square centimeters) of solid-colored, hunter orange clothing or material in a visible manner.
- Hunters must sign in and out each day.
- Hunters may not possess loaded firearms within 50ft (15m) of a refuge road, including roads closed to vehicles.
- Hunters may not shoot onto or across refuge roads, including roads closed to vehicles.

Justification: The National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57) identifies six priority wildlife-dependent public uses of national wildlife refuges: environmental education, interpretation, hunting, fishing, wildlife observation and wildlife photography. Where these uses are determined to be compatible, they are to receive enhanced consideration over other uses in planning and management. The bear hunt will provide a compatible wildlife-dependent recreational opportunity. Opening the Great Dismal Swamp NWR to black bear hunting will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 15 year Re-evaluation Date: July 19, 2021

References

- Hellgren, Eric Charles. 1988. Ecology and Physiology of a Black Bear (*Ursus americanus*) Population in Great Dismal Swamp and Reproductive Physiology in the Captive Female Black Bear. Dissertation for Doctor of Philosophy. Virginia Polytechnic State and University. Blacksburg, VA. 231 pp..
- Tredick, Catherine Anne, 2005. Population Abundance and Genetic Structure of Black Bears in Coastal North Carolina and Virginia Using Noninvasive Genetic Techniques. Master of Science Thesis. Virginia Polytechnic Institute and State University. Blacksburg, Va.
- Maryland DNR. "2004-2005 Black Bear Project Report." Submitted by Harry Spiker, Black Bear Project Manager, August 22, 2005. Retrieved from website, <http://www.dnr.state.md.us/wildlife/gpar/gpbear.asp> on December 9, 2005.

Use: Collections

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

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- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

(a) What is the use? Is the use a priority public use?

Collecting small numbers of invertebrates, plants, water samples, and soil samples for use in scientific and educational studies will be permitted. The establishing authorities for the refuge directed that environmental education would be among the priority public uses for the refuge, and the National Wildlife Refuge System Improvement Act identified environmental education as a priority use for the National Wildlife Refuge System. Much of the collection done on the refuge would be for environmental education purposes or research.

This compatibility determination does not cover the collection of Cultural and Archeological resources. The collection of Cultural and Archeological resources will be covered by separate compatibility determinations on a case by case basis.

(b) Where would the use be conducted?

Most of the collections will be conducted at designated outdoor classroom sites at Jericho Lane, Washington Ditch, and the Railroad Ditch entrances. However, some collections will occur at other locations within the refuge to support biological, ecological, and other related research. This activity will be limited during designated hunts. The Washington Ditch entrance and access to the boardwalk will be available during the hunts while the other entrances to the refuge will be closed to these activities due to safety concerns.

(c) When would the use be conducted?

Collections will occur throughout the year upon issuance of a special use permit. The permit will outline specific periods for the activity to avoid conflicts with refuge operations or unacceptable wildlife disturbance. The time period for collections may be limited based upon management and/or visitor use priorities.

(d) How would the use be conducted?

Permittees will be required to submit a request in writing documenting why and how the collections will be used for educational or scientific purposes. The requests will be reviewed by the refuge manager and resource management specialists to develop stipulations for the permit, if necessary, to assure that the collection does not interfere with refuge operations or create unacceptable wildlife disturbance. The permittee must also present appropriate state and federal permits, if applicable. If the collections are part of research study, the permittee will be required to submit reports, to be stipulated within the permit, that allow the refuge manager to provide oversight of the collections and obtain useful information for science-based stewardship.

(e) Why is this use being proposed?

The refuge incorporates globally-rare habitats and some habitats that are rare within Virginia and North Carolina, so the refuge offers opportunities for scientists to study biological, ecological and other features that cannot be easily found elsewhere. Moreover, the research is expected to add to the body of knowledge required by refuge resource specialists to accomplish science-based stewardship of the Great Dismal Swamp ecosystem.

Availability of Resources: No special facilities will be required for these collections, so the basic cost to the refuge is the staff time (less than \$2,000 annually) required to review and process collection requests. Therefore, this activity would have no significant affect on refuge funding and staffing.

Anticipated Impacts of the Use:

Collections on the refuge may result in negligible impacts to air and water quality from the emissions of automobiles and automobile runoff from parking lots. These impacts are not expected to be significant. Disturbance to wildlife and vegetation by individuals making the collections could occur when accessing the study area by foot or vehicle. It is possible that direct mortality could result as a by-product of the collection activities. This mortality will be minimal.

While the activity of collecting may disturb individual wildlife and plants periodically, and result in the mortality of invertebrates and plants collected, no adverse impact on wildlife or plant populations or conflict with the refuge mission is anticipated.

Overall, however, allowing these collections by non-Service personnel will have very little impact on Service interests. If the collections are conducted with professionalism and integrity, potential adverse impacts far outweigh the knowledge gained.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: The collection of natural resources is compatible with stipulations listed below.

Stipulations to Ensure Compatibility:

- Collections will be restricted to permittees who have consulted refuge staff concerning special requirements needed to assure that the collections do not disrupt sensitive flora and fauna and to assure that collections do not disrupt refuge operations.
- Permittees must present appropriate state and federal permits that may be required in addition to the refuge permit.
- The collections will be monitored to assure compliance with permit conditions and assess impacts.
- Collections will not be permitted unless a demonstrated need exists to examine flora and fauna specific to the Great Dismal Swamp ecosystem.
- Less than 50 collection permits will be issued annually.
- Most collections will involve insects, aquatic invertebrates, plant cuttings, and soil, water.
- Most collections will occur within designated outdoor classroom areas; thus confining the minimal wildlife disturbance to small specific areas of the refuge.

Justification:

The Great Dismal Swamp National Wildlife Refuge arguably incorporates the best remaining remnant of an expansive wetlands ecosystem. Therefore, the study of flora and fauna specific to the once vast system will often focus within the refuge, and these collections will support and be a part of scientific research and education. Information obtained as a result of many of the collections will be incorporated into environmental education and interpretation programs on the refuge.

The National Wildlife Refuge System Improvement Act of 1997 identified environmental education and interpretation as a priority public use for refuges. Moreover, the establishing legislation for the Great Dismal Swamp National Wildlife Refuge directed that wildlife and wildlands research and environmental education be the top priority public uses for the refuge. The collection of small numbers of invertebrates, plants, water, archeological artifacts and soil samples for use in scientific and educational studies of Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 10 year Re-evaluation Date: July 19, 2016

Use: Concession operation

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

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Description of Use:

(a) What is the use? Is the use a priority public use?

A concession operation, or cooperative arrangement, will be established to support visitor services in Suffolk and Chesapeake. These services will include guided boat tours on Lake Drummond; public transportation to Lake Drummond; canoe, kayak, and bicycle rentals; operation of the bookstore, and distribution of some refuge literature. The concession operation, or cooperative arrangement, will facilitate wildlife observation, interpretation, wildlife photography, and environmental education, four of the six wildlife-dependent priority public uses identified in the National Wildlife Refuge System Improvement Act.

(b) Where would the use be conducted?

In Suffolk, the existing headquarters facility will be converted to a visitor services center that will support concession operations that provide a tram service to Lake Drummond; boat tour on Lake Drummond; canoe, kayak, and bicycle rentals; and operation of a refuge bookstore. To support these concession activities, the facilities will have to be improved as follows: expansion of existing parking; retrofitting headquarters for bookstore and concession offices; construct a 200 yard road to link the existing parking lot to Railroad Ditch. In Chesapeake, concession operations, or cooperative arrangement, will part of a new visitor center complex adjacent the Dismal Swamp Canal and US Highway 17. This operation will support canoe, kayak, and bicycle rental; tour boat transportation to Lake Drummond; and the operation of a refuge bookstore.

(c) When would the use be conducted?

The normal operating hours for the concessions would be daylight hours every day, including weekends and holidays, seven days a week, in both Suffolk and Chesapeake portions of the refuge. These operating hours may be subject to modification due to management or biological demands. Any changes to the normal routine will be advertised in advance when possible. This activity will be limited during designated hunts. The Washington Ditch

entrance and access to the boardwalk will be available during the hunts while the other entrances to the refuge will be closed to this activity due to safety concerns.

(d) How would the use be conducted?

The refuge would solicit concessionaires through a competitive bidding process or develop a cooperative agreement with a partner. The successful bidder would enter into a contract or cooperative agreement with the refuge to provide basic visitor services at the specified locations on the refuge. The concessionaire would compensate the U.S. Fish and Wildlife Service through rendering payments and/or services to the refuge.

(e) Why is this used being proposed?

The concessionaire services will enhance the safety and enjoyment of visitors who are participating in priority wildlife dependent recreational activities that have been identified by the establishing authorities and the National Wildlife Refuge Improvement Act. This will also reduce the need for additional refuge staff.

Availability of Resources: These activities would be part of a proposed major expansion of visitor services that would require additional specific budget allocations to support the construction of new facilities in Chesapeake and restoration of facilities in Suffolk. The estimated cost of implementation is summarized as follows:

Suffolk – Rehab of existing headquarters/parking*	\$2,000,000
one staff (ORP)	\$50,000
Tram*	\$150,000
Tram maintenance	\$10,000
*start-up cost	

Anticipated Impacts of Use:

The use of a concession accommodates greater numbers of visitors and provides them with the appropriate gear, food, and tour options. Without the concession, a significant number of the visitors to the refuge, especially out of town visitors, would not experience the interior of the Great Dismal Swamp NWR. Their length of stay would also be shorter due to fewer opportunities.

Short-term impacts:

Impacts from individual concession users are expected to be similar to other public use activities. Accommodating larger groups may increase the likelihood of disturbances related to noise, trampling, compaction, or longer duration of continuous activity. Regular scheduled tours to specific areas may displace wildlife use at certain locations to a greater extent than random visitor use.

Providing equipment to access the swamp allows the visitor greater opportunities to observe wildlife, photograph, and fish, enhancing their refuge experience. In addition, environmental education messages and refuge rules and regulations can be communicated since the concession employees are in direct contact with the visitor prior to their trip into the refuge.

Long-term impacts:

As a business, the concession is concerned over the long-term with making a profit and expanding their customer base. Promotion of their services may bring greater numbers of visitor groups and individuals to the refuge and thus, greater disturbance to the resources may occur. Long term use of an area will be monitored as visitation increases and adaptive management strategies developed to address significant impacts. Monitoring would include an evaluation of changes in wildlife use patterns, trampling of vegetation, and compaction of the soil around the activity area. The refuge and concession operator will work collaboratively to manage group size and distribute groups to various sites to minimize the impacts resulting from this use.

Soil and vegetation disruption will result from expanding the parking area at the refuge headquarters and constructing the 200-yard road to link the parking area directly to Railroad Ditch. This would be mitigated by best management practices during construction. Less than one acre of pine forest habitat would be impacted. This impact will be minor due to the scope but long term.

Some negligible long-term impacts to water quality would occur along the ditches of the Railroad Ditch entrance, since paved surfaces would result in vehicle fluids flowing into ditches rather than absorbed in the dirt roads. Increased vehicle emissions would occur due to increased visitation and the operation of on the refuge. To limit the amount of vehicle emissions that increased visitation would bring, an electric tram will be utilized to conduct tours. Wildlife disturbance at designated public use corridors will increase minimally due to increased numbers of visitors. This impact will be mitigated by emphasizing the use of low impact transportation (canoes, kayaks, bicycles, hiking, tram). Only 21 acres of 111,203 acres would be impacted by this use (0.019%).

Cumulative impacts:

Through the concession tours and contacts with individuals, the public will become more informed about the refuge and its resources. Certain information presented may be carried to other natural recreation areas giving additional benefit to the messages that are presented.

Improved visitor support services will likely result in annual visitation to the western refuge entrances increasing to 100,000 visits. This impact will be limited to designated, trails and waterways. The bulk of the refuge will not be impacted by this visitation.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: A concession operation is compatible with stipulations listed below.

Stipulations Necessary to Ensure Compatibility:

- The concession operations will be conducted in accordance with a contract or cooperative agreement between the concessionaire and the Service.
- The agreement will ensure that impacts to the resources in the refuge are minimal.
- Impacts will be monitored so that any sign of unacceptable damage or disturbance would be ameliorated immediately.
- All activities will be conducted within existing refuge regulations.

Justification: The National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57) identifies six legitimate and appropriate uses of wildlife refuges: environmental education, interpretation, hunting, fishing, wildlife observation and wildlife photography. These priority public uses are dependent upon healthy wildlife populations. Where these uses are determined to be compatible, they are to receive enhanced consideration over other uses in planning and management.

The concession is allowed to operate on the refuge to provide recreational opportunities to a wide spectrum of individuals with various levels of outdoor skills. They also provide a needed service for those visitors that do not possess appropriate equipment or did not bring their own. The concession staff will increase contacts with the visitors, providing an opportunity to present educational information about the swamp and the ecosystem and regulatory information.

The concession operation will directly support fishing, wildlife observation and photography, and environmental education/interpretation --- priority uses identified by the National Wildlife Refuge System Improvement Act of 1997. The refuge's establishing legislation also directed that concessions operations be used to support access and transportation to Lake Drummond and the Dismal Swamp Canal. A concessionaire will also provide local economic benefits and support priority visitor service operations.

The use of a concession operation on the Great Dismal Swamp will result in increased service to a greater number of the visiting public at much lower cost to the federal government. Instead of expending appropriated funding and hiring more federal government employees to provide the same service, the government will either receive funds or services from the concession operator. The concession operation will concentrate on the six priority wildlife-dependent public uses of the refuge system, will interpret the message of the Service and the National Wildlife Refuge System, and will encourage environmental stewardship. The concession operation will contribute to the achievement of the purposes and mission of the Great Dismal Swamp NWR and the National Wildlife Refuge System.

The use of concession operations to facilitate wildlife dependent priority public uses on the Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 10 year Re-evaluation Date: July 19, 2016

Use: White-tailed deer hunt

Refuge Name: Great Dismal Swamp National Wildlife Refuge

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Description of Use:

(a) What is the use? Is this use a priority public use?

White-tailed deer hunting will be conducted on approximately 100,000 acres of the refuge. Hunting is identified as a priority use by the establishing authorities for the refuge as well as the National Wildlife Refuge Improvement Act. This is an historic and traditional use of the Great Dismal Swamp and will provide a quality wildlife-dependent recreational opportunity to the participating hunters. Special youth hunts will be scheduled in various areas of the refuge within state seasons.

(b) Where would the use be conducted?

Deer hunting will take place from up to 80 miles of refuge roads. Usually hunters do not hunt further than 200-300 yards from the road. Hunters will gain access into the refuge at Portsmouth Ditch in Chesapeake; Jericho Lane and Railroad Ditch in Suffolk; and Corapeake Ditch in Gates County, North Carolina. To ensure the safety of people visiting the office and the boardwalk along Washington Ditch buffer areas around these areas are closed to hunting activities. Additionally, areas along the Dismal Swamp Canal, the Feeder Ditch and other publicly used canals have been closed to protect the public. Portions of the hunt area may be closed due to management activities.

(c) When would the use be conducted?

The hunts will be scheduled within the deer hunting seasons established by Virginia and North Carolina. Traditionally, these hunts have been held in October, November, and December. The timing of the hunts on the refuge will continue to be coordinated annually with the states. In Virginia, the refuge is situated on the eastern side of the "Dismal Swamp Line," a geographical boundary that distinguishes between the early season which generally starts in early October, and the late season, which starts in mid-November. The refuge therefore hosts

the deer hunt during the early season. In North Carolina, the refuge season begins shortly before the rest of the North Carolina season. State biologists and administrators have approved the refuge season in North Carolina.

(d) How would the use be conducted?

Hunters will purchase hunt permits from the refuge during publicly announced periods in August and September. The permit will allow hunters to gain access into up to four designated locations on the refuge for scouting days and all designated hunt dates. During the designated hunt dates, a maximum hunter capacity will be established for each entrance in order to inhibit overcrowding of the hunt areas. Hunting will occur only during legal hunting hours specified by the states. Bag limits are the same as the states' generally, but the refuge allows either sex to be taken during the entire hunt, which is variably different from the surrounding states. Once again, this has been coordinated with the states and meets with their approval.

(e) Why is this use being proposed?

The primary purpose of the deer hunts is to maintain the deer population within the carrying capacity of the refuge habitat. Harvested deer will be spot-checked to monitor the overall health of the deer population. The hunts also provide a wildlife-dependent priority public use activity identified by the establishing authorities for the refuge and the National Wildlife Refuge Improvement Act. In eastern Virginia especially, there are very few other public hunting lands available.

Availability of Resources: A fee is charged for each hunt permit, and most of the fee is returned to the refuge to support visitor services and partially offset the cost of administering the hunts. The estimated costs are summarized below:

Permit administration:	\$5,000
Road maintenance:	\$20,000
Law Enforcement:	\$2,000
Security/Search and Rescue:	\$2,000

Anticipated Impacts of the Use: Accommodating this wildlife-dependant use is expected to result in minimal impacts. Although hunting causes mortality to wildlife, season dates and bag limits are set with the long-term health of populations in mind. The white-tailed deer population is monitored by state agencies. Survey information indicates that a limited harvest will not adversely affect the overall deer population level. A healthy deer population will be sustained as a result of maintaining the population within an acceptable level that can be supported by the habitat. Minimal disturbance to wildlife and vegetation will occur, most of which occurs within 200-300 yards of the roads. This is typically minimal and short-term in duration. Overall impacts of disturbance are minimized by only hunting 14 days of the deer season. Vehicle impacts to the refuge are usually minimal and short-term. Vehicles are restricted to designated roadways and no off-road access is allowed. Regular refuge operations are disrupted on hunt dates, since the refuge staff must support an extended shift (16 hours) and maintain preparedness for law enforcement and search/rescue operations.

To reduce possible conflicting uses of the refuge other non-hunting uses are severely limited. Washington Ditch and the $\frac{3}{4}$ mile boardwalk trail is open to allow for other wildlife-dependent uses. The impacts to other public uses are substantial for the fourteen days of the deer hunt but mitigated by allowing access as the Washington Ditch area.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: White-tailed deer hunting is compatible with stipulations listed below.

Stipulations Necessary to Ensure Compatibility:

- Deer harvest data and hunter participation will be evaluated annually to assess the effectiveness of the deer hunt program in supporting refuge resource management objectives and wildlife oriented recreational opportunities.
- All hunters must obtain a refuge hunt permit.
- Only shotguns and archery equipment.

- All hunters must obtain an appropriate state hunting license and comply with state and refuge regulations.
- All hunters must carry a compass and whistle
- All hunters must sign in and out each day.
- A maximum of 1000 hunters will be issued hunt permits.
- Approximately 200 deer (or less) will be harvested each season.
- Approximately 80 miles of roads will be maintained and mowed before each hunt, and some road repairs will be required during rainy hunt seasons.
- General visitors will be confined to using the Washington Ditch Entrance (Dismal Town Trail) on hunt dates.

Justification:

Natural predation and mortality are not adequate to maintain deer populations at levels consistent with the habitat, so overpopulation would be expected to develop without the deer hunt, resulting in a significant decline in the health and vitality of the deer and habitat degradation. Hunting is also recognized as a wildlife-dependent priority public use within the National Wildlife Refuge System and the establishing legislation for the Great Dismal Swamp National Wildlife Refuge. White-tailed deer hunting on Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 15 year Re-evaluation Date: July 19, 2021

Use: Hunt dog retrieval

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

(a) What is the use? Is the use a priority public use?

Hunting deer utilizing dogs is a historic and traditional method of hunting in southeastern Virginia and northeastern North Carolina. Although the refuge does not allow this activity on the refuge it is a popular method of hunting on surrounding refuge lands. Due to the proximity of this activity to refuge lands, hunting dogs occasionally stray onto refuge property and their owners seek permission to access the refuge to retrieve these dogs. Access will be permitted to retrieve hunting dogs that have been used for legal hunting on privately owned lands adjacent the refuge. This use is not identified as a priority use but does benefit the refuge by facilitating the removal of these dogs which disturb wildlife on the refuge.

(b) Where would the use be conducted?

Dogs stray across the boundary from the northeast corner to the southeast corner of the refuge. Individuals wishing to retrieve their dogs must obtain a Special Use Permit from the refuge office prior to entering the refuge. Permittees will be allowed vehicle access at the four entrances that are used for the white-tailed deer hunts: Portsmouth Ditch, Jericho Lane, Railroad Ditch, and Corapeake Ditch. Dog retrievers will not be allowed, in general, on Washington Ditch road.

(c) When would the use be conducted?

Vehicle access for dog retrieval will be allowed daily during daylight hours within the period between October 1 and early January (one week after the state deer hunting seasons close) with prior notification of refuge staff by the permittee. Access may be limited due to bad road conditions, other weather related conditions, or habitat management activities.

(d) How would the use be conducted?

Dog retrieval permits will be purchased from the refuge that will document stipulations and procedures to gain access to the refuge. Each permit allows five permittees access. For each day a dog retriever desires access, they will call the refuge office during normal office hours and receive the combination to the gate. Dog retrieval will not be combined with deer hunting. Dog retrievers will not be in possession of guns or bows and arrows. This activity may be limited due to road conditions or management activities.

(e) Why is this use being proposed?

Deer that are being legally tracked by dogs on adjacent lands frequently lead the chase into the refuge. The dogs are often led several miles deep into the refuge, exhausting them to the point that it is difficult for them to return to the point where the chase began. Hunting dogs also chase, harass and disturb wildlife. Therefore, allowing dog owners to retrieve the dogs represents the humane treatment of animals that were engaged in a lawful activity and helps to limit disturbance to wildlife. In addition, retrieving the dogs reduces the probability of developing a population of feral dogs on the refuge. Feral dogs disturb and prey on wildlife.

Availability of Resources: A user fee will be charged for the few permits that are issued for this use. Direct costs are estimated as follows:

Permit Administration:	\$1,000
Law Enforcement:	\$1,000

Anticipated Impacts of the Use:

Hunting dogs left for extended periods of time on the refuge can harass and kill wildlife and be particularly harmful to ground nesting birds during the nesting season. Some dogs can at times become a direct or perceived threat to other persons engaged in recreation on the Refuge. Young children especially can be easily frightened by dogs, and even knocked down and injured by overly friendly dogs. Dogs often leave waste at public use sites which many visitors find objectionable. This waste can also be deposited in wetlands. Hunting dogs will be removed from the refuge before they are injured, die, or become feral and disturb wildlife long-term. Very little disturbance to wildlife, plants, or other resources is expected from allowing permittees access to the refuge to retrieve dogs due to the low numbers of permittees. As with all access to the refuge, vehicles add emissions to the air and potential contaminants to the water, but these are expected to be negligible.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: Dog retrieval is compatible with stipulations listed below.

Stipulations Necessary to Ensure Compatibility:

- Special permit conditions for this activity will be reviewed and updated to assure that safe and efficient access is provided with minimal wildlife disruption.
- Approximately 30 permits (or fewer) will be issued annually to retrieve dogs.
- Permittees must call during normal office hours to receive authorization for entry into the refuge for permitted activity.
- Access will normally be allowed seven days a week during the designated dog retrieval season.
- Access may be denied or restricted based upon road conditions or management activities.
- Permittees will not possess guns or alcohol.
- Permittees will not be allowed vehicle access on Washington Ditch.

Justification:

These hunting dogs have been released during legal hunting activities off the refuge. However, failure to retrieve these dogs once they enter the refuge could result in their death due to exhaustion and starvation as well as significant disturbance to wildlife. Some of these dogs could become feral, creating more wildlife disturbance and threatening visitors. Therefore, it is in the refuge's best interest to have these dogs retrieved by their owners. Dog

retrieval on Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 10 year Re-evaluation Date: July 19, 2016

Use: Recreational fishing from boats on Lake Drummond.

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

(a) What is the use? Is the use a priority public use?

Fishing from boats will be permitted on Lake Drummond, one of two natural lakes in the state of Virginia. While fishing in Lake Drummond may not be perceived as high quality like you may find in other reservoirs, rivers, bays or sounds due to the lower fish population, it is more of a challenge to find the native fish in the dark water. Also, historically, a strong demand has existed to pursue black crappie during the spring on Lake Drummond, and the lake has produced trophy fish. Fishing has been identified as a wildlife-dependent priority public use by the establishing authorities for the refuge and the National Wildlife Refuge System Improvement Act.

(b) Where would the use be conducted?

Fishing will be restricted to Lake Drummond, and only allowed from a boat. Fishing from the bank causes erosion and compaction of fragile organic soils. Fishing from the boat ramp has been shown to result in increases in litter and fishing tackle left on the site. Ditches contain much debris that would snag fishing tackle creating litter and other debris to be left in the ditches.

(c) When would the use be conducted?

This activity will be permitted throughout the year, from sunrise to sunset, with most of the activity occurring during April-June. April through June is perceived to be the best time to fish Lake Drummond by the people who have traditionally used it. Boat access is allowed year round via the Feeder Ditch but restricted when accessing via Railroad Ditch entrance (April – June). This activity will be limited during designated hunts. Lake Drummond will be closed to these activities due to safety concerns.

(d) How would the use be conducted?

Lake Drummond is open to fishing all year from sunrise to sunset. Boaters entering from the east side of the refuge via the Chesapeake Boat Ramp and the Feeder Ditch do not have to have a permit. However, to access the lake from that side, they have to transport their boats over a spillway, using a railway trolley to pull them across. That trolley is limited to lower weight boats, and thus the Army Corps of Engineers, who maintains it, has posted a vessel weight limitation of 1000 lbs.

Access to the Lake through the Railroad Ditch entrance requires a permit. The refuge issues permits for boaters to launch their boats directly onto the west side of the lake via the Railroad Ditch entrance from April 1- June 15. These boats are limited to 25 horsepower.

(e) Why is the use being proposed?

The Service has the authority to control all public access to Lake Drummond. The Railroad Ditch Entrance is entirely within the refuge, and the Service can manage public access via the Feeder Ditch from US 17 under the terms of a long-term permit with the Corps of Engineers. Fishing has been identified as a wildlife-dependent priority use by the establishing authorities for the refuge and the National Wildlife Refuge System Improvement Act. Historically, a strong demand has existed to pursue black crappie during the spring on Lake Drummond, and the lake has produced trophy fish. Fishing on Lake Drummond is unique in that the lake is not stocked, and is not home to large populations of typical game fish. Fishing on a natural lake is more of a challenge, and the entire circumference of Lake Drummond is owned by the refuge, so there is very little evidence of human intrusion once the boat ramp is left behind, except for the occasional air traffic.

Availability of Resources: This activity can be supported within existing funding levels for the refuge.

Annual Maintenance (roads, ramp, pier): \$5,000
Staff time (permits, inspections, law enforcement): \$5,000

Anticipated Impacts of the Use:

Fishing has shown no assessable environmental impact to the refuge, its habitats, or wildlife species in the past and is not anticipated to so in the future. Disturbance to wildlife is limited to occasional disturbance such as flushing non-target species (waterfowl) and harvesting fish species while recreational fishing. Restrictions on sizes of boats and motors will assure minimal impacts to aesthetics on the Lake Drummond and disturbance to wildlife and other public use activities. Harvests are regulated to take only surplus specimens, thus assuring viable, healthy populations within management and habitat guidelines. Restrictions to the fishing program assure that these activities have no adverse impacts on other wildlife species and little adverse impact on other public use programs. Minimal wildlife disturbance, erosion, automobile emissions, and automobile fluid contamination will occur along the launching routes and in Lake Drummond. This is limited by a restricted access season (April – June), ensuring minimal impact. Negligible oil residue from outboard exhausts may occur in the lake. Less than 5,000 motorized boats of ten horsepower or less will enter the lake from the Feeder Ditch. The activities follow all applicable laws, regulations and policies. These activities are compliant with the purpose of the refuge and the National Wildlife Refuge System Mission. Operating this activity does not alter the refuge's ability to meet habitat goals and it helps support several of the primary objectives of the refuge.

Fishing is a priority public use listed in the National Wildlife Refuge System Improvement Act. By facilitating this use on the refuge, we will increase visitors' knowledge and appreciation of fish and wildlife, which will lead to increased public stewardship of fish and wildlife and their habitats on the refuge and in general. Increased public stewardship will support and complement the Service's actions in achieving the refuge's purposes and the mission of the National Wildlife Refuge System.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: Fishing on Lake Drummond is compatible with stipulations listed below.

Stipulations to Ensure Compatibility:

- The fishing program will be evaluated periodically to determine impacts. If adverse impacts are detected fishing may be restricted or discontinued.
- Fishing is limited to Lake Drummond only.
- Access can be gained via the Feeder Ditch year round or the Railroad Ditch April through June.
- Boats are limited to a maximum of 25 horsepower engines. If access is gained via the Feeder Ditch then a boat utilizing the railway tram is limited to 1000 lbs.
- Must possess a valid state fishing license and comply with all state fishing and boating regulations.

Justification:

Fishing is a wildlife dependent priority public use for the National Wildlife Refuge System. Moreover, this use was identified as priorities under the terms of the establishing legislation for the refuge. Fishing on the Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 15 year Re-evaluation Date: July 19, 2021

Use: Research and Studies Conducted by Outside Agencies, Universities, and Organizations

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

(a) What is the use? Is the use a priority public use?

Research and studies by non-Service personnel will be permitted throughout the refuge. The research will focus on the study of the flora, fauna, ecology, and cultural history of the Great Dismal Swamp. This activity is not a priority use, but these studies provide analysis and information about the cultural and natural history of the Great Dismal Swamp. This information is critical to providing sound stewardship and restoration of the Great Dismal Swamp ecosystem. Collections of water, soil, plants and invertebrates will be allowed in conjunction with research when appropriate.

(b) Where would the use be conducted?

These studies will be conducted throughout the refuge, with the exact locations to be determined by the focus of the study. Each proposal will be evaluated by refuge staff and other subject matter experts to determine the value of the study and study site. If needed, recommendations to modify the study site will be provided.

(c) When would the use be conducted?

The timing will depend on the project that is being conducted. Research will be allowed to occur throughout the year. Individual research projects may require one or two visits per year, while other projects may require daily visits. The time allowed for each project will be limited to the minimum required to complete the project. This activity will be limited during designated hunts. The Washington Ditch entrance and access to the boardwalk will be available during the hunts while the other entrances to the refuge will be closed to these activities due to safety concerns.

(d) How would the use be conducted?

The methods will depend upon the research being conducted. Researchers will be required to submit a written proposal that outlines the methods, materials, timing, and justification for proposed project. These proposals will be reviewed by refuge resource management specialists to assess environmental impacts, assure that the project does not interfere with other resource operations, and provide suggested modifications to the project to avoid disruptions to refuge wildlife and operations. Research will be restricted to those projects that will be expected to enhance the body of knowledge about the natural and cultural history of the Great Dismal Swamp ecosystem. Researchers will be expected to obtain and present any additional federal, state, and archaeological permits if applicable.

(e) Why is this use being proposed?

The refuge incorporates wildlife and habitats that are uncommon in Virginia and North Carolina. Some habitats, such as the Atlantic white cedar forests and pine-pocosin woodlands, are considered globally-rare. Therefore, scientists would be hard-pressed to find representative areas outside the refuge on which to conduct studies. Moreover, the information generated by these studies enhances the ability of the Service to provide science-based stewardship of the Great Dismal Swamp ecosystem.

The Service encourages and supports research and management studies on refuge lands that will improve and strengthen decisions on managing natural resources. The refuge manager encourages and seeks research that clearly relates to approved refuge objectives, improves habitat management, and promotes adaptive management. Priority research addresses information on better managing the Nation's biological resources that generally are important to agencies of the Department of Interior, the National Wildlife Refuge System, and State Fish and Game Agencies that address important management issues, or demonstrate techniques for managing species or habitats.

Researchers will submit a final report to the refuge on completing their work. For long-term studies, we may also require interim progress reports. We expect researchers to publish in peer-reviewed publications. All reports, presentations, posters, articles or other publications will acknowledge the Refuge System and the Great Dismal Swamp refuge as partners in the research. All posters will adhere to Service graphics standards. We will insert this requirement to ensure that the research community, partners, and the public understand that the research could not have been conducted without the refuge having been established, its operational support, and that of the Refuge System.

Availability of Resources: This activity can be supported within existing funding levels for the refuge. Refuge staff will be required to review, coordinate, process, and administer permit requests for this activity as summarized below:

Staff time – permits review/coordination:	\$5,000
Monitoring/enforcement:	\$5,000

Anticipated Impacts of the Use:

Research activities may disturb fish and wildlife and their habitats. For example, the presence of researchers can cause waterfowl or other migratory birds to flush from resting and feeding areas, cause disruption of birds and turtles on nests or breeding territories, or increase predation on nests and individual animals as predators follow human scent or trails. Efforts to capture animals can cause disturbance, injury, or death to groups of wildlife or to individuals. To wildlife, the energy cost of disturbance may be appreciable in terms of disruption of feeding, displacement from preferred habitat, and the added energy expended to avoid disturbance. Sampling activities can cause compaction of soils and the trampling of vegetation, and the establishment of temporary foot trails vegetation beds. Negligible vehicle emissions, contaminants from vehicle fluids and very minor erosion from roads might result from vehicle access to the research sites. Research efforts may also discover methods that result in a reduction in impacts described above.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: Research is compatible with stipulations listed below.

Stipulations to Ensure Compatibility:

- Collections will be restricted to permittees who have consulted refuge staff concerning special requirements needed to assure that the collections do not disrupt sensitive flora and fauna and to assure that collections do not disrupt refuge operations.
- Permittees must present appropriate state and federal permits that may be required in addition to the refuge permit.
- Field activities will be monitored to assure compliance with permit conditions and assess impacts.
- Cultural and archeological surveys will be coordinated with the Regional Historic Preservation Officer and the appropriate State Historic Preservation Officer to assure compliance with the Archeological Resource Protection Act.
- Approximately 30 research permits (or fewer) would be issued annually.
- Research permits will be issued only for bona-fide natural resource and cultural research purposes to individuals representing agencies, universities or other organizations.

Justification: The Great Dismal Swamp National Wildlife Refuge arguably incorporates the best remaining remnant of an expansive wetlands ecosystem. Few similar opportunities for research occur in the historic Great Dismal Swamp. The study of flora, fauna, and cultural history will directly support refuge habitat management and environmental education. Environmental education and interpretation have been identified as priority uses by the National Wildlife Refuge System Improvement Act of 1997 and in the refuge's establishing legislation. Allowing research and studies by non-service personnel on Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 10 year Re-evaluation Date: July 19, 2016

Use: Restore forest types and habitat by harvesting and salvaging forest products.

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

(a) What is the use? Is it a priority public use?

Forest products will be harvested and/or salvaged as part of habitat restoration projects on the refuge. Typically, these operations will involve commercial logging that will be implemented to imitate natural forces, such as fires and hurricanes that once influenced and maintained representative habitats within the Great Dismal Swamp ecosystem. In addition, forest areas that have been damaged by fires and hurricanes may be salvaged in order to promote natural regeneration of the forests.

Commercial logging and salvage operations are not recognized as wildlife-dependent priority uses by the National Wildlife Refuge System Improvement Act. However, the establishing authorities for the refuge recognized that “timber management” would be required to maintain some of the forests representative of the Great Dismal Swamp ecosystem. Therefore, this activity is an important use for the Great Dismal Swamp National Wildlife Refuge.

(b) Where would this use be conducted?

These timber harvest operations would occur in pine forests and pine/pocosin habitats as well as the Atlantic white cedar forests on the refuge. Up to 4,000 acres of Atlantic white cedar and up to 10,000 acres of pine and pine/pocosin forest areas would be treated. These stands are in areas throughout the refuge.

(c) When would the use occur?

These operations would occur throughout the year as conditions allow. Due to higher water levels in the winter, much of the timber harvest may take place primarily during the spring, summer and fall to reduce impacts. These activities may be limited during designated hunts. Areas of refuge will be closed to these activities due to safety concerns during the hunts.

(d) Why is this use being proposed?

Reliance upon natural forces to maintain habitats representative of the Great Dismal Swamp ecosystem is no longer feasible due to the human-caused disruptions of fire and hydrologic regimes. The Great Dismal Swamp evolved with wildfire, and its forest and habitat types developed because of the influence of wildfire. However, wildfire has been suppressed for a number of years, and still is. It must continue to be suppressed because of the surrounding development, airports, highways, etc. that would be threatened by fire or disrupted by smoke. Therefore, in order to accomplish the refuge's mission of restoring and maintaining rare forest types, active habitat manipulation is required. Harvesting timber is one way to ensure regeneration of the forest type. Making that timber harvest commercially viable makes it economically feasible for the refuge to maintain these habitats..

Availability of Resources: The annual costs are estimated as follow:

Preparation of Habitat Management Plans/Programs:	\$10,000
Pre/Post Treatment Surveys/Assessments:	\$10,000
Permit Administration:	\$10,000
Road Repairs/Maintenance	\$50,000

Anticipated Impacts of the Use:

The operation of heavy equipment would compact the soil at the treatment sites. Using low ground pressure equipment and aerial forwarding (such as by helicopter) when feasible will help mitigate the compaction. Minor sedimentation would occur in the ditches adjacent to the treatment sites. Heavy equipment and vehicles would add emissions to the air. Visual aesthetics would be impaired temporarily at the treatment sites. Temporary, but significant, wildlife and vegetation disturbance would occur in the immediate vicinity of the treatment sites while harvests were underway. Minor wildlife disturbance would also occur along the roads used to haul timber from the refuge. Natural regeneration of Atlantic white cedar would increase and result in the expansion of viable cedar forests. Habitat conditions within pine/pocosin would improve for potential nesting of red-cockaded woodpeckers. The probability of catastrophic wildfires on the refuge would be reduced in the treated areas.

Impacts to other users of the refuge will be moderate, as areas of logging and log hauling will be closed to other public use, except as unavoidable.

Public Review and Comment: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: The salvage of timber products is compatible with stipulations listed below.

Stipulations Necessary to Ensure Compatibility:

- Timber sales will not be conducted for economic benefits. Instead, the operation will be merely a tool to implement critical habitat restoration programs for the refuge. Therefore, these timber sales will be consistent with approved forest management plans and programs that outline the habitat restoration needs for the refuge.
- A maximum of 4,000 acres of Atlantic white cedar forests would be available for commercial timber sales.
- A maximum of 10,000 acres of pine/pocosin forests would be designated for select commercial cutting.
- Timber sales would be conducted under special use permit or contract or a combination of the two to specify low ground pressure equipment and other details to minimize impacts and maximize benefits.

Justification: The refuge's establishing legislation directed that a timber management program be conducted on the refuge and stated, through the Secretary's report of 1974, that "commercial timbering for the sake of revenue will not be considered as an objective of management". Timber management will be used primarily to imitate natural influences, especially fire that used to shape and maintain the natural biological diversity of the Great Dismal Swamp ecosystem. Moreover, these sales will also provide economic benefits.

All timber management practices performed will be for the primary purpose of achieving restoration and other habitat and wildlife management objectives. It will be to the benefit of the government to accomplish forested habitat restoration goals via commercial timber harvest as opposed to paying a contractor to remove the timber where possible. Whether the harvest is a goods-for-services setup or a timber sale contract where the purchaser

pays the government is immaterial. The objective of restoring and managing habitat is met at the least cost to the government, and the resulting resources are utilized where feasible. The restoration and protection of the diversity of plants and animals in the Great Dismal Swamp is the congressionally mandated purpose of the refuge, and this tool is one way to accomplish the refuge mission. Timber is not harvested on the refuge for any other reason than forest fire fuel management and habitat restoration and management. Timber harvest will contribute to the achievement of the purposes and mission of the Great Dismal Swamp NWR and the National Wildlife Refuge System.

The harvest of forest products for the restoration of forest habitats on Great Dismal Swamp NWR will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 10 year Re-evaluation Date: July 19, 2016

Use: Environmental Education, Interpretation, Wildlife Observation, and Wildlife Photography

Refuge Name: Great Dismal Swamp National Wildlife Refuge

Establishing and Acquisition Authorities: Dismal Swamp Study Act of 1972 (P.L. 92-478); Dismal Swamp Act of 1974 (P.L. 93-402); Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b; Fish and Wildlife Act of 1956, 16 U.S.C. 742f(a)(4), 16 U.S.C. 742f(b)(1); Migratory Bird Conservation Act, 16 U.S.C. 715-715d, 715e, 715f-715r

Refuge Purposes:

- Subject to such restriction, conditions, and reservations as are specified in deeds [granted to the United States by The Nature Conservancy] ... the Secretary shall administer the lands and waters and interests therein in accordance with the provisions of the National Wildlife Refuge System Administration Act ... the Secretary may utilize such additional statutory authority as may be available to him for the conservation and management of wildlife and natural resources, the development of outdoor recreation opportunities, and interpretive education as appropriate to carry out the purposes of this Act ... the Secretary may not acquire any such lands and waters and interests therein by purchase or exchange without first taking into account such recommendations as may result from the study required under Public Law 92-478. (Dismal Swamp Act of 1974, P.L. 93-402)
- ... particular value in carrying out the national migratory bird management program. (Authorizing the Transfer of Certain Real Property for Wildlife, 16 U.S.C. 667b)
- ... for the development, advancement, management, conservation, and protection of fish and wildlife resources. (16 U.S.C. 742f(a)(4);... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition servitude. (16 U.S.C. 742f(b)(1), Fish and Wildlife Act of 1956)
- ...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. (16 U.S.C. Migratory Bird Conservation Act)

National Wildlife Refuge Mission: To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Description of Use:

A. What is the use? Is the use a priority use?

The use is wildlife-dependent recreation: wildlife observation and wildlife photography, environmental education and interpretation, often referred to as “non-consumptive wildlife dependant recreational use.” The National Wildlife Refuge System Improvement Act of 1997 identifies wildlife observation, wildlife photography, environmental education, and interpretation as four of the six priority wildlife-dependent recreational uses to be facilitated in the Refuge System, and encourages the Service to provide opportunities for the public to enjoy them.

B. Where would the use be conducted?

Wildlife observation, wildlife photography, environmental education and interpretation will occur on all existing ditch roads, the Washington Boardwalk Trail, the two lake piers, and at Lake Drummond. The activities will also occur at new trails and facilities such as the Feeder Ditch Trail, the observation platforms at Lake Drummond and at the Railroad/West marsh, the environmental education pavilion, the refuge contact station in Sunbury, at designated outdoor classroom sites, and at the visitor center complex.

Visitors will be encouraged to focus their wildlife-dependent activities to the five primary entrance areas: Jericho Lane, Washington Ditch, Railroad Ditch, Corapeake Ditch, Feeder Ditch, the refuge contact station in Sunbury, and at the visitor center complex in Chesapeake.

C. When would the use be conducted?

Wildlife observation and wildlife photography will be conducted on the trails daily, year-round from dawn to dusk (i.e., daylight hours only), unless a conflict with a management activity or an extenuating circumstance necessitates deviating from these procedures. Closures for extensive flooding, downed trees, ice storms or other events affecting human safety are examples that would require these uses to be temporarily suspended. Environmental education

and interpretation programs will be scheduled based upon staff availability and public request. Activities at the visitor center complex will be year-round, based on sufficient staffing.

D. How would the use be conducted?

Utilization of the ditch roads will be authorized for bicycles and pedestrians who simply want to walk or hike. All users will be expressly restricted to the established roads and trails, outdoor classroom sites, boardwalks, observation platforms and piers. Automobile access will be limited to the Railroad Ditch Entrance until public transportation is made available. Education groups may request a special use permit allowing automobile access through gated areas to designated outdoor classroom sites when necessary.

Water access for these activities is limited to Lake Drummond with authorized use of canoes, kayaks, and motorized boats of less than 25 hp when accessed from the Interior Ditch boat ramp, and motorized boats of less than 1000 lbs. when accessed from the Feeder Ditch. Access from the Interior Ditch boat ramp is only by special permit and during the season of April 1 to June 15. Permit access is allowed daily, during daylight hours with advance reservation. Access from the Feeder Ditch is allowed daily, year-round, during daylight hours.

E. Why are these activities being proposed?

These activities will be conducted to provide compatible educational and recreational opportunities for visitors to enjoy the resource and to gain understanding and appreciation for fish and wildlife, wildlands ecology and the relationships of plant and animal populations within the ecosystem, and wildlife management. They will enhance the public's understanding of natural resource management programs and ecological concepts to enable the public to better understand the problems facing our wildlife and wildlands resources, to realize what effect the public has on wildlife resources, to learn about the Service's role in conservation, to better understand the biological facts upon which Service management programs are based, and to foster an appreciation as to why wildlife and wildlands are important to them. The authorization of these uses will produce a more informed public, and advocates for Service programs. Likewise, these uses will provide opportunities for visitors to observe and learn about wildlife and wildlands at their own pace in an unstructured environment and to observe wildlife habitats firsthand. Professional and amateur photographers will also be provided opportunities to photograph wildlife in their natural habitats. Photographic opportunities obviously will result in increased publicity and advocacy for Service programs. These uses will also provide wholesome, safe, outdoor recreation in a scenic setting, with the realization that those who come strictly for recreational enjoyment will be enticed to participate in the more educational facets of the public use program, and can then become advocates for the refuge and the Service,

Availability of Resources: At full development additional staff will be stationed at the visitor center in Chesapeake, the Refuge contact station in Sunbury, and the visitor service center in Suffolk. Staff will develop visitor center exhibits, leaflets, signs, video, website, and special events; develop and conduct more environmental education and interpretation events and programs for different age groups, types of groups (including scouts, 4-H, college, adults, etc.) and for larger numbers of groups; hold teacher workshops, recruit and train more volunteers; revise leaflets and develop new ones; update kiosk information, develop needed signs; catalog and store photos, slides, and historical items, develop habitat demonstration areas; work with local Tourism and Park and Recreation Departments, the Virginia Department of Game and Inland Fishers, Back Bay NWR, North Carolina and Virginia State Parks and other organizations to plan events and activities; display off-site exhibits at more local events; prepare and present off-site programs; develop ecotourism with Virginia Tourism; participate in the development of watershed-wide cooperative outreach groups, develop better relationships with the media; and be able to respond immediately to public inquiries.

The development of many of these facilities and activities is dependent upon receiving adequate funding and staffing. The refuge will continue to manage these activities at current levels until this funding is made available.

These activities occur on roads that would have to be maintained for other refuge management purposes.

The direct costs of supporting these activities are summarized as follows:

Annual Cost

Parking Lot Maintenance	\$10,000
Mowing	\$10,000
Trail Restroom Maintenance	\$2,400
Gate Maintenance	\$2,000

Boat ramp maintenance	\$5,000
Facility maintenance	\$20,000
Educational materials	\$10,000
Interpretative materials	\$10,000
Teacher workshops	\$5,000
Law Enforcement	\$41,000
Outdoor Recreation Planner	\$50,000
Maintenance Worker	\$50,000

Facility Cost (Start-up cost)

Feeder Ditch Trail	\$1,800,000
Canal Bridge	\$1,000,000
Observation Tower, Lake Drummond/ Observation platform, Railroad/West	\$250,000
Road stabilization for Corapeake Auto tour	\$1,000,000
Jericho EE site	\$357,000
Land acquisition for Rt17 Visitor Center	\$2,000,000
Rt. 17 Visitor Center	\$10,000,000
Interpretative media	\$150,000

Anticipated Impacts of the Use:

The impacts summarized below are further described in the Environmental Assessment prepared for the Great Dismal Swamp NWR Comprehensive Conservation Plan.

In that the refuge is an 111,203 acre dense seasonally-flooded wetland forest and that these wildlife dependant activities, with few exceptions, are confined to the network of ditch roads, minimal wildlife and habitat disturbance will occur. During periods of high visitation (spring, summer, fall), the dense vegetation along the roads and trails provides a physical barrier which limits the impacts to the surrounding habitat and physically restricts the movement of pedestrians. Additionally, movement into the surrounding habitat is hampered by extensive areas of surface water and the instability of peat soils. The restriction of use to designated roads and trails is posted and printed in all visitor information.

Activities on Lake Drummond are restricted to pier or boat use. Again the dense forest vegetation forms a barrier around the lake rim. There is virtually no accessible bank or shore line, providing physical protection to the habitat and wildlife populations. In addition, the remoteness of the lake (3 ½ miles and around a spillway from the public boat ramp to the east) or by special permit only during the brief April 1 to June 15 season, limits the use of the lake to less than 5,000 vessels per year—most of which are canoes and kayaks—thus, negligible oil residual from outboard exhaust is anticipated.

The Service has the authority to control all public access to Lake Drummond. The Railroad Ditch Entrance is entirely within the refuge, and the Service can manage public access under the terms of a long-term permit with the Corps of Engineers. Public access will be managed and curtailed if adverse impacts to wildlife are detected. Construction of the visitor center will occur on prior disturbed habitat. In the parcel, land that is not used for the facility or for parking will be restored to wetland habitat, therein providing a positive impact for the watershed. The parcel is separated from the refuge by the Dismal Swamp Canal, providing another physical barrier of protection for wildlife and habitat from the anticipated large numbers of visitors.

Additional facilities (outdoor classroom sites, observation platforms, and the education pavilion) will result in moderate disturbance to wildlife while under construction. These impacts will be short lived and should not significantly affect wildlife or the habitat. They will be designed to be of minimal impact to a limited area. Best management practices as well as storm water runoff and sedimentation plans will be implemented to minimize erosion or degradation to water quality. The proposed Feeder Ditch Trail and observation tower will use an existing dirt road bed and ditch spoils bank where possible and be boardwalked through the more sensitive soil areas. The proposed canoe trail will use an existing waterway and existing parking facilities. Minimal disturbance

of the ditch bank to a limited area will be necessary to allow for soft canoe or kayak launching. Maintenance of the water trail will consist of periodic removal of downed trees.

Best practices and environmentally friendly products will be used in the paving of trail entrances. Any impacts during paving will be localized.

The refuge appears to be in a rural setting, but in fact is surrounded by 1.5 million people in the most rapidly growing communities in Virginia. The nearby populations significantly increase the need for law enforcement on the refuge. Added facilities will require additional patrolling of parking areas and trails to provide visitor security and to inhibit littering, vandalism, and other violations.

Adding a visitor center and an environmental education pavilion on the refuge will increase the number of activities, programs, and needed materials to reach a much greater segment of the public with up-to-date information that promotes the Great Dismal Swamp NWR and the Service mission and goals and can create support for wildlife both on and off the refuge. As more people enjoy quality experiences, visitation will increase. Thus, the communities surround the refuge will benefit through increased use of the facilities, service stations, lodging, and restaurants.

Working with the community, community organizations, tourism, schools, local businesses, news media, congressional entities, constituent groups, and state and local government agencies to develop programs, events, and activities can only increase the good association with the community and help establish a better understanding of the refuge and the Service and their missions and goals.

Public Review and Comments: This compatibility determination was included in the Draft CCP/EA. The Draft CCP/EA was available for comment from March 13 to April 24, 2006. At that time the draft was posted on the refuge's and the FWS Service's website. In addition, the refuge staff held three public meetings to collect public comments, written and verbal, on the draft CCP/EA, including all compatibility determinations.

Determination: Environmental Education, Interpretation, Wildlife Observation and Wildlife Photography are compatible with stipulations listed below.

Stipulations Necessary to Ensure Compatibility:

- General access will be restricted to daylight hours only.
- Access for these uses will be limited to designated roads, trails, observation decks, and facilities that are listed on refuge brochures and signs.
- Boating access on Lake Drummond will be limited to less than 5000 vessels annually.
- All boat use on Lake Drummond will be monitored to assess wildlife disturbance. Portions of Lake Drummond may be closed, if necessary, to protect sensitive wildlife populations.
- Access beyond gated areas will be by special use permit for organized environmental education groups.
- A special use permit will be required of commercial touring groups.

Justification: The National Wildlife Refuge System Improvement Act of 1997 (P.L. 105-57) identifies six priority wildlife-dependent public uses of national wildlife refuges: environmental education, interpretation, hunting, fishing, wildlife observation and wildlife photography. Where these uses are determined to be compatible, they are to receive enhanced consideration over other uses in planning and management. Environmental education, interpretation, wildlife observation and wildlife photography provide compatible wildlife-dependent recreational opportunities. Opening the Great Dismal Swamp NWR to these activities will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established.

Signature: Refuge Manager /s/ Suzanne C. Baird Date June 16, 2006

Concurrence: Regional Chief /s/ Anthony D. Léger Date July 19, 2006

Mandatory 15 year Re-evaluation Date: July 19, 2021